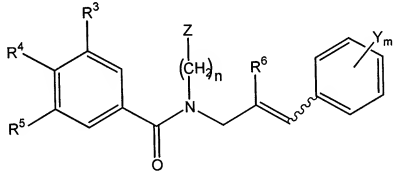
Amendments to the Claims

Please amend the claims as follows (the changes in these claims are shown with ~~strikethrough~~ for deleted text and underlines for added text). A complete listing of the claims is listed below with proper claim identifiers. This listing of claims will replace all prior versions, and listings, of claims in the application.

What is claimed is:

1. (Currently Amended) A modulator of the structure (I), or a salt thereof:



(I),

where m is an integer from 1 to 5;

each Y is independently selected from the group consisting of hydrogen, halogen, -CN, -NO_2, -OH, -OR', -C(O)R', -CO_2R', -O(CO)R', -C(O)NR'R", -OC(O)NR'R", -SR', -SOR', -SO_2R', -SO_2NR'R", -NR'R", -NR'C(O)R", -NR'C(O)$_2$R", -NR'SO_2R", -NR'(CO)NR"R"', unsubstituted or substituted C_{1-8} alkyl, unsubstituted or substituted C_{2-8} alkenyl, unsubstituted or substituted C_{2-8} alkynyl, unsubstituted or substituted C_{3-8} cycloalkyl, unsubstituted or substituted C_{6-10} aryl, unsubstituted or substituted 5- to 10-membered heteroaryl, and unsubstituted or substituted 3- to 10-membered heterocyclyl;

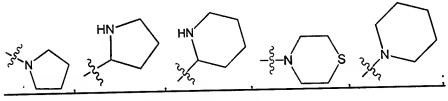
where each R', R" and R'" are independently hydrogen, halogen, unsubstituted or substituted C_{1-8} alkyl, unsubstituted or substituted C_{6-10} aryl, unsubstituted or substituted 5- to 10-membered heteroaryl, and unsubstituted or substituted 3- to 10-membered heterocyclyl;

n is 0, 1, 2 or 3;

~~Z is CHR^1R^2, OR^1, or NR^1R^2;~~

~~R^1 and R^2 are each independently substituted or unsubstituted alkyl or hydrogen, or Z in combination with R^1 and R^2 form a substituted or unsubstituted 5- to 8-membered ring comprising at least one nitrogen and 0 to 3 additional heteroatoms;~~

Z is a substituted or unsubstituted group of the formulae:



R^6 is alkyl, hydrogen, or halogen; and

R^3, R^4, and R^5 are each independently selected from the group consisting of hydrogen, halogen, -CN, $-NO_2$, -OH, -OR', -C(O)R', $-CO_2R'$, -O(CO)R', -C(O)NR'R", $-OC(O)NR'R"$, -SR', -SOR', $-SO_2R'$, $-SO_2NR'R"$, -NR'R", -NR'C(O)R", $-NR'C(O)_2R"$, $-NR'SO_2R"$, $-NR'(CO)NR"R'"$, unsubstituted or substituted C_{1-8} alkyl, unsubstituted or substituted C_{2-8} alkenyl, unsubstituted or substituted C_{2-8} alkynyl, unsubstituted or substituted C_{3-8} cycloalkyl, unsubstituted or substituted C_{6-10} aryl, unsubstituted or substituted 5- to 10-membered heteroaryl, and unsubstituted or substituted 3- to 10-membered heterocyclyl, or where any two of R^3, R^4 or R^5 together with the atoms which they substituted form a substituted or unsubstituted 3- to 10-membered heterocycyl.

2. (Previously presented) The modulator of claim 1, where R^6 is hydrogen.

3. (Currently amended) The modulator of claim 1, where R^6 is substituted or unsubstituted C_{1-8} alkyl.

4. (Previously presented) The modulator of claim 1, where R^6 is halogen.

5. (Currently amended) The modulator of claim 1, where R^3, R^4, and R^5 are each independently selected from the group consisting of hydrogen, -OR', and substituted or unsubstituted C_{1-8} alkyl.

6. (Currently amended) The modulator of claim 1, where R^3, R^4, and R^5 are each independently selected from the group consisting of –OR' and hydrogen.

7. (Previously presented) The modulator of claim 1, where R^3, R^4, and R^5 are each –OR', where R' is substituted C_{1-8} alkyl.

8. (Previously presented) The modulator of claim 1, where R^4 and R^5 together with the atom which they substitute form substituted or unsubstituted 5- to 6-membered heterocyclyl containing 1 to 2 oxygen atoms.

9. (Previously presented) The modulator of claim 1, where Z is CHR^1R^2 and where R^1 and R^2 together with Z form C_{3-10} cycloalkyl with 0 to 3 substituents selected from the group consisting of halogen, -CN, $-NO_2$, -OH, -OR', -C(O)R', $-CO_2R'$, -O(CO)R', -C(O)NR'R", -OC(O)NR'R", -SR', -SOR', $-SO_2R'$, $-SO_2NR'R"$, -NR'R", -NR'C(O)R", $-NR'C(O)_2R'$, $-NR'SO_2R'$, $-NR'(CO)NR"R'''$, unsubstituted or substituted C_{1-8} alkyl, unsubstituted or substituted C_{2-8} alkenyl, unsubstituted or substituted C_{2-8} alkynyl, unsubstituted or substituted C_{3-8} cycloalkyl, unsubstituted or substituted C_{6-10} aryl, unsubstituted or substituted 5- to 10-membered heteroaryl, and unsubstituted or substituted 3- to 10-membered heterocyclyl.

10. (Canceled)

11. (Canceled)

12. (Canceled)

13. (Canceled)

14. (Previously presented) The modulator of claim 1, where Z is a substituted or unsubstituted group of the formula:

15. (Previously presented) The modulator of claim 1, where Z is a substituted or unsubstituted group of the formula:

16. (Previously presented) The modulator of claim 1, where Z is a substituted or unsubstituted group of the formula:

17. (Previously presented) The modulator of claim 1, where Z is a substituted or unsubstituted group of the formula:

18. (Previously presented) The modulator of claim 1, where Z is a substituted or unsubstituted group of the formula:

19. (Previously presented) The modulator of claim 1, where Z is a substituted or unsubstituted group of the formula:

where R^7 is selected from the group consisting of hydrogen, -C(O)R', $-CO_2R'$, -C(O)NR'R", $-SO_2R'$, unsubstituted or substituted C_{1-10} alkyl, unsubstituted or substituted C_{1-8} alkoxyl, unsubstituted or substituted C_{2-10} alkenyl, unsubstituted or substituted C_{2-10} alkynyl, unsubstituted or substituted C_{3-10} cycloalkyl, unsubstituted or substituted C_{6-10} aryl, C6-10 aryloxy unsubstituted or substituted 5- to 10-membered heteroaryl, and unsubstituted or substituted 3- to 10-membered heterocyclyl.

20. (Previously presented) The modulator of claim 1, where R^7 is substituted or unsubstituted C_{1-10} alkyl, substituted or unsubstituted C_{1-10} alkoxy, substituted or unsubstituted aryloxy, or substituted or unsubstituted C_{3-10} cycloalkyl.

21. (Original) The modulator of claim 1, where n is 1, 2, or 3.

22. (Currently amended) The modulator of claim 1, where m is 1 or 2, and each Y is a halogen.

23. (Previously presented) The modulator of claim 1, where m is 0.

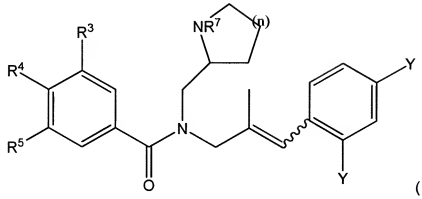
24. (Currently amended) The modulator of claim 1, where substituted alkyl, substituted alkenyl, substituted alkynyl and substituted cycloalkyl can each independently be substituted 1 to 3 times with halogen, -OR', -NR'R", -SR', -SiR'R"R"', -OC(O)R', -C(O)R', $-CO_2R'$, -CONR'R", -OC(O)NR'R", -NR"C(O)R', -NR'-C(O)NR"R"', $-NR"C(O)_2R'$, $-S(O)R'$, $-S(O)_2R'$, $-S(O)_2NR'R"$, $-NR'S(O)_2R"$, -CN, oxo (=O or –O-) or $-NO_2$, where R', R" and R"' each independently hydrogen, halogen, unsubstituted C_{1-8} alkyl, unsubstituted C_{3-6} cycloalkyl, unsubstituted C_{2-8} alkenyl, unsubstituted or C_{2-8} alkynyl,

unsubstituted aryl, unsubstituted heteroaryl, unsubstituted or substituted heterocyclyl.

25. (Currently amended) The modulator of claim 1, where substituted aryl and substituted heteroaryl can each independently be substituted 1 to 3 times with halogen, unsubstituted or substituted alkyl, unsubstituted or substituted alkenyl, unsubstituted or substituted alkynyl, unsubstituted or substituted cycloalkyl, -OR', oxo (=O or -O), -OC(O)R', -NR'R", -SR', -R', -CN, $-NO_2$, $-CO_2R'$, -CONR'R", -C(O)R', -OC(O)NR'R", -NR"C(O)R', -NR"$C(O)_2$R', -NR'-C(O)NR"R"', -NH-$C(NH_2)$=NH, -NR'$C(NH_2)$=NH, -NH-$C(NH_2)$=NR', -S(O)R', $-S(O)_2$R', $-S(O)_2$NR'R", -NR'$S(O)_2$R" and $-N_3$, where R', R" and R"' each independently hydrogen, halogen, unsubstituted C_{1-8} alkyl, unsubstituted C_{3-6} cycloalkyl, unsubstituted C_{2-8} alkenyl, unsubstituted C_{2-8} alkynyl, unsubstituted or substituted aryl, unsubstituted heteroaryl, unsubstituted heterocyclyl.

26. (Currently amended) The modulator of claim 1, where substituted heterocyclyl can be substituted 1 to 3 times with halogen, unsubstituted or substituted alkyl, unsubstituted or substituted alkenyl, unsubstituted or substituted alkynyl, unsubstituted or substituted cycloalkyl, -OR', oxo (=O or -O), -OC(O)R', -NR'R", -SR', -R', -CN, $-NO_2$, -OC(O)NR'R", -NR"C(O)R', -NR"$C(O)_2$R', -NR'-C(O)NR"R"', -NH-$C(NH_2)$=NH, -NR'$C(NH_2)$=NH, -NH-$C(NH_2)$=NR', -S(O)R', $-S(O)_2$NR'R", -NR'$S(O)_2$R" and $-N_3$, where R', R" and R"' each independently hydrogen, halogen, unsubstituted C_{1-8} alkyl, unsubstituted or C_{3-6} cycloalkyl, unsubstituted C_{2-8} alkenyl, unsubstituted C_{2-8} alkynyl, unsubstituted aryl, unsubstituted heteroaryl, unsubstituted heterocyclyl.

27. (Currently amended) A modulator having the structure (II):



(II),

where n=0-4

where each Y is independently hydrogen or halogen;

R^3, R^4, and R^5 are each independently R^3, R^4, and R^5 are each independently selected from the group consisting of hydrogen, halogen, and -OR';

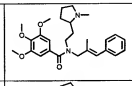
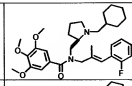
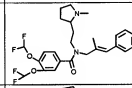
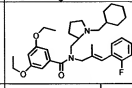
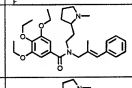
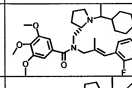
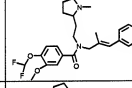
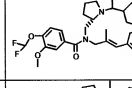
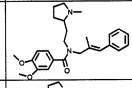
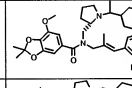
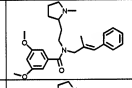
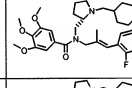
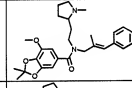
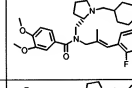
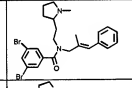
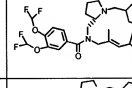
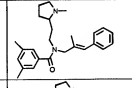
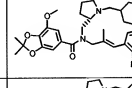
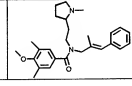
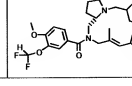
or any two of R^3, R^4, and R^5, together with the atoms which they substituted, form unsubstituted or substituted 3- to 10-membered heterocyclyl; and

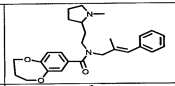
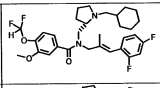
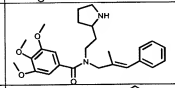
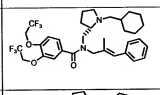
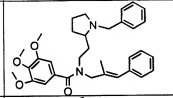
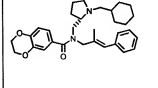
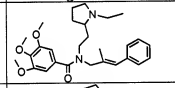
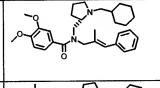
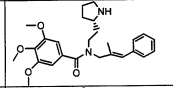
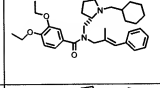
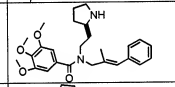
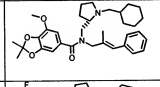
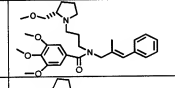
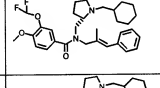
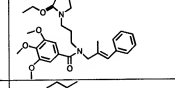
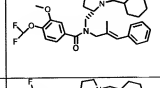
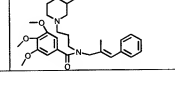
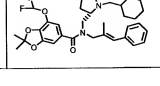
R^7 is selected from the group consisting of hydrogen, -C(O)R', $-CO_2R'$, -C(O)NR'R", $-SO_2R'$, unsubstituted or substituted C_{1-8} alkyl (optionally ~~C1-8~~ [[$_{1-8}$]] alkoxyalkyloxy, ~~CH2CH2OCH2CH2OMe~~ $CH_2CH_2OCH_2CH_2OMe$)alkyl, unsubstituted or substituted C_{2-8} alkenyl, unsubstituted or substituted C_{2-8} alkynyl, unsubstituted or substituted C_{3-8} cycloalkyl, unsubstituted or substituted C_{6-10} aryl, unsubstituted or substituted 5- to 10-membered heteroaryl, and unsubstituted or substituted 3- to 10-membered heterocyclyl.

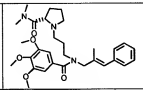
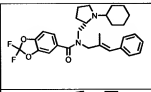
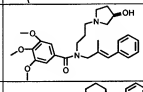
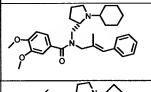
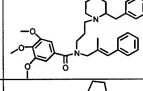
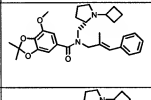
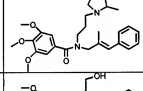
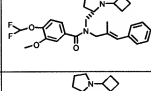
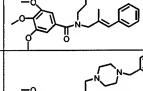
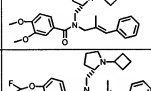
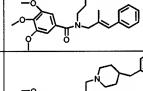
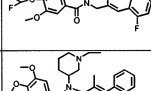
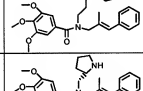
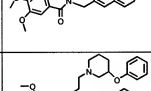
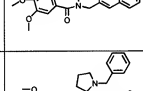
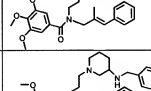
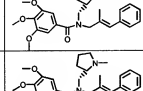
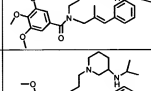
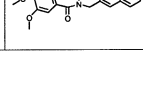
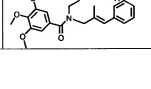
28. (Previously presented) The modulator of claim 27, where R^7 is C_{1-8} alkoxyalkyloxy.

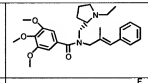
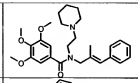
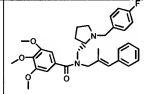
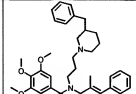
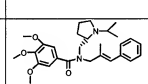
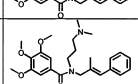
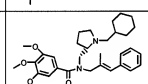
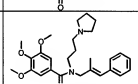
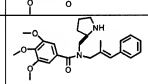
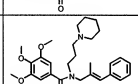
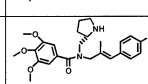
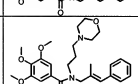
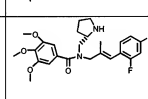
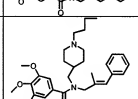
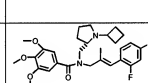
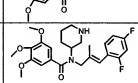
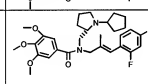
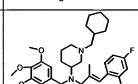
29. (Original) The modulator of claim 27, where n is 1.

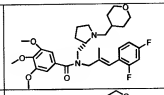
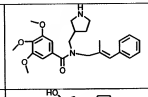
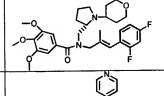
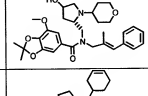
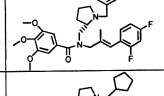
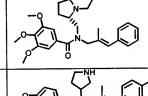
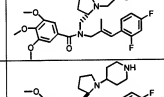
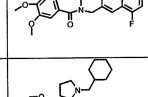
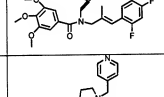
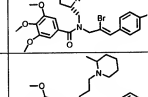
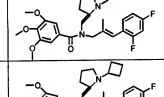
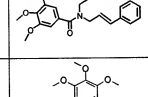
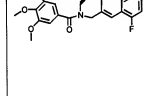
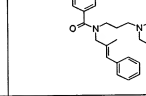
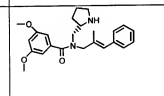
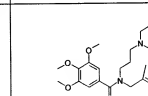
30. (Original) A modulator comprising one of the following formulae:

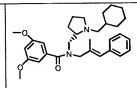
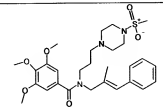
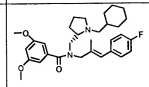
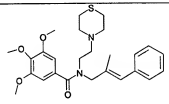
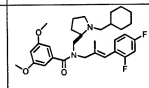
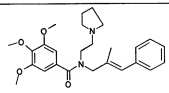
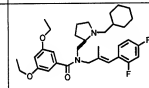
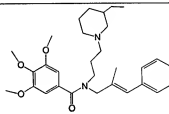
1		51	
2		52	
3		53	
4		54	
5		55	
6		56	
7		57	
8		58	
9		59	
10		60	

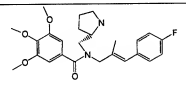
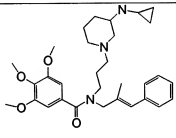
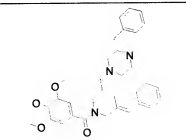
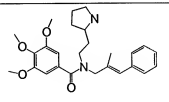
11		61	
12		62	
13		63	
14		64	
15		65	
16		66	
17		67	
18		68	
19		69	

20		70	
21		71	
22		72	
23		73	
24		74	
25		75	
26		76	
27		77	
28		78	
29		79	

30		80	
31		81	
32		82	
33		83	
34		84	
35		85	
36		86	
37		87	
38		88	

39		89	
40		90	
41		91	
42		92	
43		93	
44		94	
45		95	
46		96	

47		97	
48		98	
49		99	
50		100	

101		104	
102		105	

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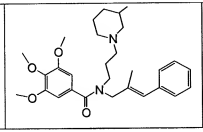
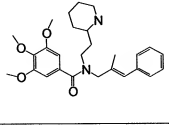


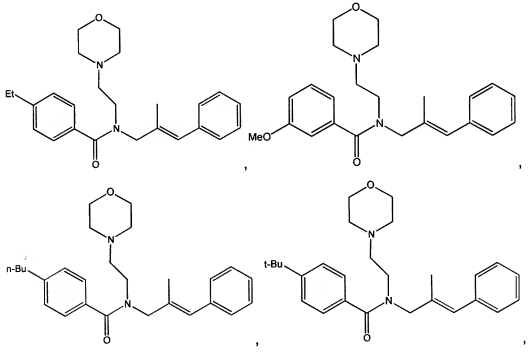


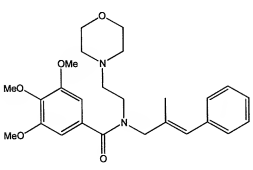
31. (Currently amended) A pharmaceutical composition comprising the modulator of claim 1 and a pharmaceutically acceptable carrier.

32. (Original) A pharmaceutical composition comprising the modulator of claim 27 and a pharmaceutically acceptable carrier.

33. (Withdrawn) A pharmaceutical composition comprising the modulator of claim 30 and a pharmaceutically acceptable carrier.

34. (Withdrawn) A pharmaceutical composition comprising a compound of the formulae:

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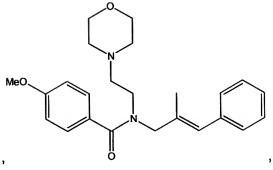
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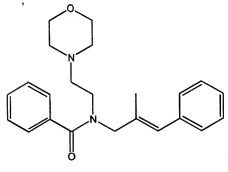
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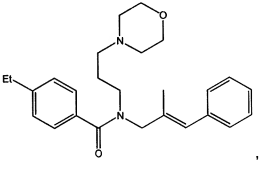
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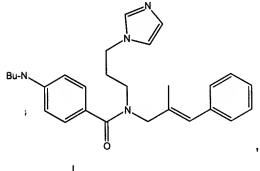
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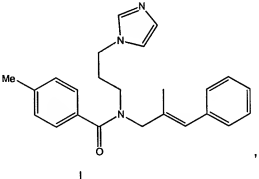
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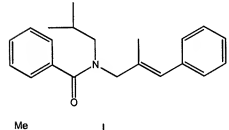
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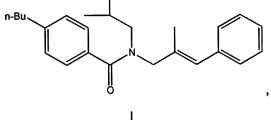
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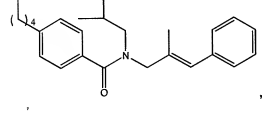
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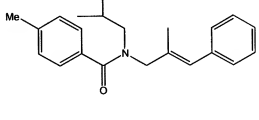
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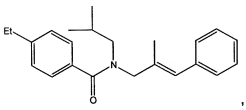

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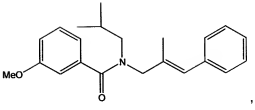

and a pharmaceutically acceptable carrier.

35. (Withdrawn) A method of inhibiting the binding of chemokines I-TAC and/or SDF-1 to a CCXCKR2 receptor, comprising contacting the composition of claim 34 with a cell that expresses the CCXCKR2 receptor for a time sufficient to inhibit the binding of the chemokines to the CCXCKR2 receptor.

36. (Withdrawn) A method of inhibiting the binding of chemokines I-TAC and/or SDF-1 to a CCXCKR2 receptor, comprising contacting the modulator of claim 1 with a cell that expresses the CCXCKR2 receptor for a time sufficient to inhibit the binding of the chemokines to the CCXCKR2 receptor.

37. (Withdrawn) A method of treating cancer, comprising administering a therapeutically effective amount of the composition of claim ~~3234~~ 34 to a cancer patient for a time sufficient to treat the cancer.

38. (Withdrawn) A method of treating cancer, comprising administering a therapeutically effective amount of the modulator of claim 1 to a cancer patient for a time sufficient to treat the cancer.